IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Examiner	: Jenna Leigh Befumo	
Serial No.	: 10/501,638	
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Inventors	: Taiichi Okada	Docket No.: TIP-04-1178
	: Isoo Saito	
Title	: COATED BASE FABRIC FOR	Confirmation No.: 2464
	: AIRBAG AND METHOD FOR	
	: MANUFACTURING THE SAME	

Declaration of Taiichi Okada Under C.F.R. §1.132

Commissioner for Patents
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Sir:

I, Taiichi Okada, declare that I reside at Aichi, Japan, I am the inventor named in the above-identified U.S. Patent Application, I have for ten years been employed by Toray Industries and I am familiar with the art relating to producing yarns and fabrics for airbags.

I studied the cited references in this Application and provide some Experiments to distinguish the claimed subject matter over JP 07-252740 A.

The Experiments are described below and the results shown in the following Table:

EXPERIMENTS

TEST METHOD

Samples:

470 dtex and 144 filaments of the polyethylene terephthalate drawing threads that have each flattened and circular cross-section, and that have each 35/m and 20/m of the number of entanglements, were produced respectively. The resulting flattened cross-section yarns have 3.0 of degree of filament cross-section flatness.

The resulting filament yarns were used for warp and weft, and 48 fiber-density warps/inch and 48 wefts/inch of plain weaves were produced by the use of a water-jet loom. The max tensioning in the warping and wefting were changed between 0.2cN/dtex (being equal to 95g/yarn) and 0.5cN/dtex (being equal to 238g/yarn). Wherein, the tensioning of 0.2cN/dtex is the usual value by one of ordinary skill in the art in those days (please refer to the description "95g" in U.S. Patent No. 5,421,378, Column 4, line 62, for example).

MEASUREMENT

(1) The number of entanglements in the filaments of the yarns:

According to a water-dipping method, the number of entanglement points that have length of at least 1 mm of a sample was measured, and the number thereof per m of the sample was derived from it. Ten yarns were analyzed, and their date were averaged. The water bath had a length of 70 cm, a width of 15 cm and a depth of 5 cm. This was partitioned at 10 cm from each end in the longitudinal direction, and filled with pure water. Yarn samples were dipped in it, and the number of entanglements of each sample was measured. To remove the influence of impurities such as oil on the measurement, the pure water in the bath was exchanged for fresh water after every measurement.

(2) The number of entanglements in the filaments of the yarns in base fabric:

A base fabric to be analyzed was decomposed, and 10 warp yarns and 10 weft yarns were sampled. These samples were analyzed for the number of the entanglements therein, according to the same water-dipping method as above. The data of the ten samples were averaged separately for the warp and the weft.

RESULTS

Table

Section	The number of entanglement		The max tensioning in the warping and wefting (cN/dtex)
	in the filaments of the yarns(/m)	in the filaments of the yarns in the base fabric(/m)	
Flattened	35	16	0.2
	35	11	0.5
	20	7	0.2
	20	1	0.5
Circular	35	7	0.5
	20	2	0.2

Conclusion

The above results taught us that we could obtain the flattened cross-section yarns whose number of entanglements in the filaments of the yarns in the base fabric was 1 when we used the filaments whose number of entanglements in the filaments of the yarns was 20/m and the max tensioning in the warping and wefting was 0.5cN/dtex.

We could not obtain the flattened cross-section yarns whose number of entanglements in the filaments of the yarns in the base fabric was at most 3/m when we used filaments whose number of entanglements in the filaments of the yarns was 35/m or the max tensioning in the warping and wefting was 0.2cN/dtex.

According to Mr. Mizuki's Declaration dated January 30, 2007, the number of entanglements in the filaments of the yarns in JP 07-252740 A was from 30/m to 36/m. Furthermore, the tensioning of 0.2cN/dtex was the usual value by one of ordinary skill in the art in those days. Therefore, we understand that the number of entanglements in the filaments of the yarns in the base fabric obtained by the producing process by JP 07-252740 A was over 3/m. JP 07-252740 A is clearly different from the claimed subject matter.

The undersigned declares that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and thus such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: January 30, 2007

Taiichi Okada

Taiichi Okada